

**REMARKS**

Claims 1-20 are pending in the application. Amendments to the specification have been made in order to correct typographical and translational errors. As can be seen in the amendments to the specification at paragraphs [0064], [0067], [0068], [0070], [0077], [0078], and [0080], the words “the bottom” and “the bottom portion” of the reaction vessel or the sample, which were mistranslated from the original Korean version have been replaced with “a lower portion,” which is the more accurate translation. Further, “the upper portion” has been replaced with “an upper portion.” Still further, “the middle” of the reaction vessel has been replaced with “an intermediate portion”. By way of explanation, Exhibit A shows the Korean language version of PCT/KR02/01728, portions of which are blocked. Words that correspond to “upper portion,” “lower portion,” “intermediate portion” are underlined. The blocked passages are indicated as corresponding to the paragraph numbers in the present application. Exhibit B is the clean version of the entire Korean language PCT/KR02/01728 document. Since the wording was a mistranslation from the originally intended meaning in the Korean language, applicants assert that the amendments to the specification do not constitute new matter. Accordingly, entry of the amendments is respectfully requested

Support for the amended claims 1 and 8 can be found at pages 10-11 and 15-16 in the specification. Support for the newly added claims 17 and 19 can be found at page 12-13, paragraph [0067] in the specification. Support for the newly added claims 18 and 20 can be found at page 14, paragraph [0070] in the specification. Accordingly, no new matter has been inserted into the application.

Response to Restriction Requirement

In the Office Action of July 27, 2006, the Examiner has divided the claims into two (2) groups: Group I claims 1-7 and 15, drawn to a method of amplification (process), and Group II claims 8-14 and 16, drawn to an amplification apparatus.

Applicants traverse this requirement. Reconsideration and withdrawal thereof are earnestly requested.

The Examiner states that although Groups I and II are related as process and apparatus for its practice, the inventions are distinct because the apparatus of Group II can be used as a temperature block for carrying out enzymatic digestions.

Applicants note that the inventive apparatus is used for amplification of nucleic acid sequences using thermal convection. In the present invention, a plurality of heat sources are combined to supply heat to, or remove heat from specific regions of the sample such that a specific spatial temperature distribution is maintained inside the sample by locating a relatively high temperature region lower in height than a relatively low temperature region. Therefore, the inventive apparatus is intended to be used for temperature controlled amplification processes including the polymerase chain reaction (PCR) and related processes. Thus, it is unlikely that the inventive apparatus is used as a temperature block for carrying out enzymatic digestions, which usually requires a constant temperature, as suggested by the Examiner. Accordingly, Group II apparatus claims should be joined with Group I process claims and examined together. Further, Applicants submit that there is not a serious burden placed upon the Examiner to search and consider all of the claims.

At the least, the restriction requirement separating out the process claims should be held in abeyance until allowable subject matter is found in the apparatus claims, and then rejoined and considered at that time, as provided for under *In re Ochiai* and *In re Brouwer*.

Although Applicants respectfully disagree with the Examiner, in order to be responsive to the outstanding Restriction Requirement, Applicants provisionally elect to prosecute Group II claims 8-14 and 16, which are drawn to an amplification apparatus. Additionally, Applicants respectfully request inclusion of the newly added claims 19 and 20, which ultimately depend from the provisionally elected claim 8, in the provisionally elected Group II.

Accordingly, early examination on the merits is respectfully requested.

The Commissioner is authorized to charge JHK Law's Deposit Account No. **502486** for any fees required under 37 CFR §§ 1.16 and 1.17 and to credit any overpayment to said Deposit Account No. **502486**.

Respectfully submitted,

**JHK Law**

Dated: August 23, 2006

By: /Joseph Hyosuk Kim/  
Joseph Hyosuk Kim, Ph.D.  
Reg. No. 41,425

P.O. Box 1078  
La Canada, CA 91012-1078  
(818) 249-8177 - direct  
(818) 249-8277 - fax